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## Department: English

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### Advanced Journalism I

Elective                      Full Year  
Grade(s) 11-12  
Honors or A Level  
Prerequisite:  
Journalism and teacher  
recommendation

This course is designed for students who have already taken the basic Journalism course but who wish to expand their experiences in journalism. Students will learn not only to identify newsworthy stories but also to pursue the necessary information to be used in well-developed news/feature stories through responsible interviewing techniques learned in their basic Journalism courses. Editorials of criticism or interpretation and other stories will be developed and submitted for publication in the *Town Crier* (high school paper). Advanced Journalism students will be responsible for selecting topics for their articles, peer editing, and reviewing them with the teacher before submitting for publication in press-ready condition. Honors requirements will be given in writing to the students at the beginning of the year.

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### Advanced Journalism II

Elective                      Full Year  
Grade(s) 12  
Honors or A Level  
Prerequisite:  
Advanced Journalism I and teacher  
recommendation

Advanced Journalism II is an elective course designed for seniors who have already taken the basic Journalism and Advanced Journalism I courses and wish to expand their journalistic experiences an additional year. Only students recommended by the instructor may take Advanced Journalism II. Students in Advanced Journalism II are expected to serve as editors of the *Town Crier*, present lessons to the Journalism class, and serve as mentors to the new staff members of the newspaper. Advanced Journalism II students are expected to choose an independent project from one of three choices: 1) Research college journalism programs and prepare a written report or presentation on his or her findings. 2) Select a biography or autobiography of a journalist and prepare a written report or presentation on his or her life. 3) Contact a local journalist and arrange to shadow that person for a day; prepare a discussion and share your notes, pictures and findings with the class. Honors requirements will be given in writing to the students at the beginning of the year.

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### Advanced Placement English (Language)

Required                      Full Year  
Grade(s) 11  
Advanced Placement  
Prerequisite:  
Teacher recommendation and  
qualifying PSAT score

Advanced Placement Language and Composition (11th grade) is a course in effective writing and critical reading. Writing skills are analyzed in a systematic way by studying a variety of prose. Students assess prose writing by examining an author's use of diction, syntax, tone, structure, purpose, and meaning. Attention will be centered on developing a personal rhetorical style that cultivates strong persuasive writing skills. Students will analyze writings through close reading drills, and the lessons learned will be transferred to their own writing. Emphasis will be focused on knowing how to select and use appropriate modes of writing. This course will use the American literature course as a base, however, it will require more reading and focused writing than honor's level English. Additional summer reading is required. Students taking this course make a commitment to take the AP exam in May. Eligibility: an "A" average in Honor's English 10, a minimum PSAT score of 57 on both Critical Reading (CR) and Writing Skills (W).

## Advanced Placement English (Literature)

Required Full Year  
Grade(s)12  
Advanced Placement  
Prerequisite:  
Teacher recommendation and  
qualifying SAT score

This is a college level course for students in their last year of high school who have an interest in English and are recommended by their Grade 11 English teachers. Students wishing to take the Advanced Placement course must have an "A-" or better average in Honors English 11, an "A" in Grade 11 English A Level or a "B" or better in AP Language, and have a minimum SAT score of 62 on both Critical Reading (CR) and Writing Skills (W). The course combines lectures, seminars, short research projects, and critical papers based on readings from major British and world authors. Emphasis is placed on pre-critical discussion and writing with the goal of increasing students' ability to explain clearly, cogently, even elegantly, what they understand about literary works and why they interpret them as they do. Additional summer reading is required. Students taking this course make a commitment to take the AP exam in May.

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## Creative Writing

Elective Semester  
Grade(s)10-12  
Honors or A Level  
Prerequisite:  
None

This one-semester course is open to students in Grades 10-12. Emphasis is placed on fiction, poetry, drama, and journal writing. Students write and peer edit each day. Honors credit will require additional independent work of honors quality; written expectations will be given to students at the beginning of the semester.

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## English 10

Required Full Year  
Grade(s)10  
A, B, and Honors  
Prerequisite:  
Teacher recommendation

Tenth grade English is a college level course which reviews and strengthens previously acquired language skills while introducing more sophisticated concepts. Students analyze the elements of fiction in such works as Shakespeare's Julius Caesar, and Lee's To Kill a Mockingbird. The study of multicultural literature continues with Soto's A Summer Life and with numerous poems and nonfiction pieces in the reading anthology. Vocabulary and spelling units require weekly, cumulative quizzes, and the focus in grammar is an intensive study of mechanics. Honors level students produce a "controlled" research paper. Writing for all students focuses on diction (effective, appropriate, rich vocabulary), coherency, organization, and providing thoughtful commentary about textual evidence.

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## English 12

Required Full Year  
Grade(s)12  
Honors or A Level  
Prerequisite:  
Teacher recommendation

Twelfth grade English is a college level course that focuses on British and World Literature and includes the reading analysis of either Shakespeare's Hamlet or Macbeth. The interpretative aspects of symbolism, theme, figurative language, and style are emphasized. In writing, students produce progressively longer and more sophisticated expository writing, with explicit instruction around transitions, tone, and employing rhetorical strategies like repetition, understatement, and syntactical variation. Research skills are reviewed and a substantial paper is produced. College application essays are stressed during first semester and the twenty-minute essay is practiced for the SAT II writing test. Vocabulary study continues, and the study of grammar culminates with a unit on usage.

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## English 9

Required  
Grade(s)9  
A, B, and Honors  
Prerequisite:  
Teacher recommendation

Full Year

Ninth grade English is a college level course in which students read, discuss, and write about various literary genre, including such works as Shakespeare's Romeo and Juliet and Cisneros' The House on Mango Street. Students complete a mythology unit; study fifteen new vocabulary words per week; and in grammar, focus on parts of speech, phrases, and clauses. Writing effective responses to open response questions is explicitly taught, and there is an emphasis on providing apt textual references to support ideas in both writing and discussion. One quarter of the year is spent on a communication unit that emphasizes both speaking and listening skills. Honors level students produce a lengthy biography assignment. All ninth grade students participate in a Performance Assessment at the end of the second semester.

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## English11/American Studies

Required  
Grade(s)11  
Honors or A Level  
Prerequisite:  
Teacher recommendation

Full Year

All the traditional aspects of U.S. History and English are parts of this course. Using a thematic approach, students study these subjects with two teachers. Classes are scheduled during consecutive class periods when possible. This course provides students with insight into the relationships among our literary, cultural, artistic, philosophical, and scientific traditions, as well as their connections to the underlying concepts of man and history that have formed a uniquely diverse but common American heritage. Each student will learn techniques of research and present findings orally and in writing. There may be some common assignments and a variety of assessment tools are used. All students will participate in a Performance Assessment at the end of the second semester.

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## Journalism

Elective  
Grade(s)10-12  
Honors or A Level  
Prerequisite:  
None

Full Year

This course involves a systematic analysis of newspaper, television, and radio reporting through a study of news forms, editorial techniques, and feature writing styles. Students will be involved in all phases of school newspaper production, including writing, editing, typing and printing. This course is open to students of varying interests and abilities in Grades 10-12. Honors credit requires additional independent work of honors quality; written expectations will be given to students at the beginning of the year.

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**Department: Family and Consumer Science**

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**Adult Living**

Elective                      Semester  
Grade(s) 11-12  
A Level  
Prerequisite:  
None

Are you excited, but a little scared about living on your own after school? This course is designed to prepare young adults for their roles as adult individuals. Areas of study will cover self-analysis, family changes, money management, apartment living, purchasing a car and entertainment.

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**Child Development I**

Elective                      Semester  
Grade(s) 10-12  
A Level  
Prerequisite:  
None

The course aims to give a fundamental knowledge of human growth and development to help one understand oneself and others. The focus is on gaining an understanding of children and the role that family plays in their lives. Emphasis is given to skills essential to establishing a positive environment to maximize a child's development physically, intellectually, emotionally and socially. Participation with the children in our Little Colonials Preschool supports our classroom learning.

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**Child Development II**

Elective                      Semester  
Grade(s) 10-12  
Honors or A Level  
Prerequisite:  
Child Development I

This course focuses on the early stages of development from conception through early childhood. An in-depth study of the four areas of development helps students understand what needs to be considered to maximize a child's potential. Consideration is also given to the responsibilities of care givers, issues related to health and safety of the young child, and special challenges that may be faced. Continued participation in Little Colonials' Preschool offers experiences that help to connect academic and life skills. For honors credit, students must execute a written agreement with the instructor for additional independent work and have an A- average or above in Child Development I, along with a teacher recommendation.

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**Community Wellness and Nutrition**

Elective                      Semester  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

This course is designed to focus on making choices that will promote wellness and good health for our senior citizens in Shrewsbury. Students will research such topics as food sanitation, food safety, kitchen management, meal management and food preparation. Students will design and produce a television show and/or public service announcements that will address the challenges of our elderly and provide some practical solutions for those who must plan, shop, and cook for one or two people. This show will be aired on SPAC. This course meets two days per cycle.

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## **Early Childhood Education**

Elective  
Grade(s)11-12  
Honors or A Level  
Prerequisite:  
Child Development I and II

Students will coordinate their study of Early Childhood Education by participating in an on-site preschool lab. The students will focus on the entire operation of the preschool, including such topics as developing an appropriate environment, safety, health, routines and nutrition for children. The course will offer in-depth information on planning and implementing activities for children along with providing students with foundational work skills, techniques for guiding the behavior of children and guidelines for developing effective observation skills. For honors credit, the student must execute a written agreement with the instructor for additional independent outside work and have a A- or better average in Child Development II, along with teacher recommendation.

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## **Focus on Foods**

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Students will learn the basic technology of food preparation and be able to identify, understand, analyze, and evaluate food choices. Emphasis will be placed on safety and sanitation in food preparation. Units covered will include pastry, quick breads, yeast breads, eggs, fruits, vegetables and pasta. The basic principles of the Food Pyramid will be studied.

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## **Food Science and Nutrition**

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Focus on Foods

This course will concentrate on the principles of good nutrition based on the Food Pyramid Guidelines published by the U.S. Government. We will experiment with altering the preparation and ingredients in familiar foods to make them more healthful, yet still appealing. We will explore alternatives to less healthy eating habits and become more mindful of the labels and contents of the foods we choose to eat. This course meets four days per cycle.

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## **Interior Design**

Elective  
Grade(s)9-12  
A Level  
Prerequisite:

This course will expose students to the basic principles of interior design, as well as concepts related to housing styles, floor plans and layouts. In addition to gaining exposure to this career field, students will complete projects to demonstrate their understanding of concepts related to the course. This course meets two days per cycle.

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## Department: Foreign Language

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### Advanced Placement French

Elective Full Year  
Grade(s) Grades 11 -12  
Prerequisite:  
Four years of French and A- in French IV or French IV Honors and strong teacher recommendation. Placement test may be required

This course is intended for students who have attained a high degree of proficiency in French and who are interested in completing studies comparable in content and difficulty to a full-year college level course. This course is designed to provide students with a communicative ability in French language. The course objectives are to develop the ability to understand spoken French in various contexts, and to develop French vocabulary sufficient for reading newspapers and magazine articles, literary texts and other nontechnical writings without dependence on a dictionary. Students will also develop the ability to express themselves in French, both orally and in writing, with reasonable fluency, coherence and accuracy. Students are required to take the AP exam in May. This course is conducted entirely in French.

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### Advanced Placement Latin

Elective Full Year  
Grade(s) 11-12  
Advanced Placement  
Prerequisite:  
Four years of Latin and B in Latin IV Honors with teacher recommendation

This course is designed for those students who have attained a high degree of mastery in translating Latin literature. The goal is to prepare the student for the Latin Literature AP examination by emphasizing the literal translation of Latin lyric poetry. In addition, a major emphasis will be placed on analyzing, discussing, and writing critical essays on Latin poetry. The fundamentals of Latin grammar will be reviewed in conjunction with a thorough exploration of the history of Late Republican Rome. Summer reading and/or a special project may be required. Students must take the AP exam in the spring.

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### Advanced Placement Spanish Language

Elective Full Year  
Grade(s) 11-12  
Advanced Placement  
Prerequisite:  
Four years of Spanish and A- in Spanish IV or IV Honors and strong teacher recommendation. Placement test may be required.

This course is designed for those students who have attained a high degree of oral proficiency in Spanish. The goal of the course is to prepare the student for the Spanish AP Language examination by emphasizing the basic objectives of proficiency in listening, speaking, reading and writing. All forms of writing are emphasized especially the directed and the open-ended question. Weekly journals and critical writing pieces are included. Students hone listening and speaking skills through repeated practice in the form of dialogues, skits, interviews, and directed questions. Picture sequences are also used to practice for the exam, and grammar is reviewed, fine tuned and applied in authentic communicative situations. Students are required to take the AP exam in May. This class is conducted entirely in Spanish.

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### Chinese

Elective Full Year  
Grade(s) 10-12  
A Level  
Prerequisite:  
Director recommendation

This course begins the sequence of Mandarin Chinese and culture. Basic skills taught during this course include Pinyin (a phonetic) system, character formation and simple sentence structure. Students will be required to know up to 300 characters in order to be able to begin simple conversation in Chinese.

## French I

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Teacher recommendation

This course is designed for all students beginning the study of French. Imagine being able to carry on a conversation in French! You CAN by learning the basics of the language. Vocabulary and simple language patterns are used in classroom conversations and daily activities. You will learn a great deal about France through discussion, videos, films, hand outs and a French reader.

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## French I Transition

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Placement test and teacher recommendation

This course is designed for those students who have passed French I for credit, but have not achieved the skill level required for success in a French II class. In this course, the students will hone their listening, writing, reading and oral skills and concentrate on those segments of French I that need further review. Emphasis will be on individual student needs, and the goal of the course will be preparation for entry into French II the following year.

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## French II

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Placement test and teacher recommendation

In this course you will further develop the skills of listening, speaking, reading and writing that you acquired in French I. You will practice speaking and increase your vocabulary by creating and presenting original skits. Your writing skills will develop as you create short paragraphs and essays. A cultural reader will transport you to France as you discover the French way of life. You will discover why Paris, the City of Light, has commanded the admiration of so many visitors, and has been celebrated for centuries by writers and artists.

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## French III

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
C- in French II and teacher recommendation

This course enriches the previously learned basic skills through more challenging literature, ancillary tapes and videos. Writing skills are further developed through systematic exercises, compositions, essays and oral presentations. Put your French into action by reading a challenging detective story, French poetry, as well as the fables of LaFontaine. You will explore the province of Quebec and gain an appreciation for the French culture of our northern neighbor. The course is conducted in French.

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## French IV

Elective  
Grade(s)11-12  
A Level  
Prerequisite:  
C- in French III and teacher recommendation

This course extends the student's ability for proficiency in communication in the target language as more sophisticated expressions are learned. Students continue to read and discuss novels. Cultural focus will vary yearly to cover aspects of history, geography, art and society. This course is conducted in French.

## French V

Elective                      Full Year  
Grade(s)12  
A Level  
Prerequisite:  
B+ in French IV, A Level or B- in  
French IV Honors, and teacher  
recommendation

This course is conducted entirely in French and is sometimes taught in conjunction with French IV Honors. It is intended for those students who have achieved a reasonable degree of proficiency in French but do not wish to take an advanced placement level course. Emphasis in this course is placed on accuracy in both oral and written expression as more complex grammar is introduced.

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## Honors French II

Elective                      Full Year  
Grade(s)9-12  
Honors  
Prerequisite:  
B+ French I and teacher  
recommendation

The outstanding features of this course are the rapid pace of the program and the sophisticated proficiency of its participants. Students are introduced to "literature" with an elementary sequential reader. By the second semester, this course is conducted in French. Cultural focus: Paris

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## Honors French III

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
B+ in French II and teacher  
recommendation

This course is designed to mirror the curriculum of French III, while providing a faster pace and more attention to accuracy. Students will continue to increase self expression and hone the skills of listening, speaking, reading and writing through composition, oral presentations, collaborative projects, original poetry and fables.

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## Honors French IV

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
A- in French III, A Level or B- in  
French III Honors, and teacher  
recommendation

This course is conducted entirely in French. It is intended for those students who are preparing for entry into Advanced Placement French the following year. Emphasis is placed on developing accuracy in both oral and written expression with more complex and finite grammar.

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## Honors Latin III

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
B- in Latin II and teacher  
recommendation

This course provides a continuation of Latin II plus more sophisticated outside reading of classical authors as well as more complex grammar patterns. Students will read selections from authors of the first century B.C. with special emphasis on the prose of Cicero and selections from Caesar, Euphobius and Nepos.



## Honors Latin IV

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
B- in Honors Latin III and teacher recommendation

A continuation of Latin III Honors is a focus of this course, plus readings of selected poems of Ovid, Vergil and epic poetry will be studied through the second half of the year. By the end of the year, students will have an understanding of Latin poetry both "Epic and Elegiac" and will have been exposed to the "golden age" of Latin poetry, i.e. the early empire.

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## Honors Spanish III

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
B+ in Spanish II and teacher recommendation

This course is designed to mirror the curriculum of Spanish III, while providing a faster pace and more attention to accuracy. Students will hone skills of listening, writing and speaking through compositions, oral presentations, skits, collaborative projects, etc. They will continue to practice reading comprehension through the use of a reader of graduated difficulty. Emphasis will be on student use of the language in real life situations. Through videos and films, students will examine and discuss the peoples and customs of Mexico, El Salvador, Honduras, Cuba and Bolivia. This course is conducted entirely in Spanish.

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## Honors Spanish IV

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
A- in Spanish III, A Level or B- in Spanish III, Honors and teacher recommendation

This course is designed for those students who enjoy speaking, writing, listening and reading Spanish. Emphasis is on the use of proper grammar, but instruction is through active language. Students will present conversations, skits and dialogues. Essays and journals, generated from personal and current themes, are written weekly. Authentic literature in the form of newspapers, magazines, and short stories is used. Films and videos are presented to enhance the curriculum. Spain from the beginning to the Spanish Inquisition. This class is conducted entirely in Spanish.

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## Honors Spanish V

Elective                      Full Year  
Grade(s)12  
Honors  
Prerequisite:  
A- in Spanish IV, A Level or B- in Spanish IV, Honors and teacher recommendation

This course is designed for advanced students who wish to continue the study of Spanish. This is primarily a literature and culture course with a review of all grammar. Authentic literature studied includes short stories, short novels, plays and poetry. Films and videos that parallel the curriculum are shown. The cultural focus is Spanish art and artists, the Spanish Civil War and the rise to power of Francisco Franco. The class is conducted entirely in Spanish.

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## Latin I

Elective                      Full Year  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Latin I is a beginning course with emphasis on pronunciation, vocabulary, grammar and derivatives. Emphasis is also placed on Roman life and culture, the permanent value of the Latin language, and the social values of classical studies. The study of English derivatives from Latin roots will increase the student's working vocabulary. A deeper understanding of English grammar is also a logical outcome of this course.

## Latin II

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Latin I and teacher recommendation

Full Year

The content of Latin II has been selected and arranged in such a way as to further the student's linguistic, cultural and social development. After a review of Latin I, the students study more difficult aspects of both the language and historical events.

## Spanish I

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Teacher recommendation

Full Year

This course is designed for all students beginning the study of Spanish. Students will learn the basics of the language while developing skills in comprehension and self expression. A workable vocabulary and simple language patterns are used in conversations based on classroom experiences and daily activities. The course also introduces them to the geography and cultures of Puerto Rico, the Dominican Republic, Costa Rica and Nicaragua.

## Spanish I Transition

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Placement test and teacher recommendation

Full Year

This course is designed for those students who have passed Spanish I for credit, but have not achieved the skill level required for success in a Spanish II class. Students will hone their listening, writing, reading and oral skills and concentrate on those segments of Spanish I that need further review. Emphasis will be on individual student needs, and the goal of the course will be preparation for entry into Spanish II the following year.

## Spanish II

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Placement test and teacher recommendation

Full Year

This course provides greater development of the four skills of listening, speaking, reading, and writing, with emphasis on communicative competency. Students are introduced to short stories as they learn to read for comprehension. Interactive computer software enhances the program and allows the students to practice the concepts learned through another medium. The students are introduced to the history, geography, and the life styles of the people of Venezuela, Columbia, Argentina, Chile, Peru, Guatemala and Spain by way of films, videos, authentic realia, and native speakers.

## Spanish III

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
C- in Spanish II and teacher recommendation

Full Year

This course, conducted primarily in Spanish, is designed for those students who have demonstrated a keen interest in the language and have acquired some communicative competency with the basic skills. Oral and written skills are emphasized with frequent compositions and oral presentations, skits, and collaborative projects. Students continue to practice reading comprehension through the use of a reader of graduated difficulty. Through videos and films, students will examine the peoples and customs of Mexico, El Salvador, Honduras, Cuba and Bolivia.

## Spanish IV

Elective  
Grade(s)11-12  
A Level  
Prerequisite:  
C- in Spanish III and teacher recommendation

Full Year

This course extends the student's ability to perfect communication in the target language, via readings on contemporary Hispanic culture and customs. There is greater emphasis on written grammatical construction as students create journals, dialogues and essays. Students continue to hone speaking skills through oral presentations and role play situations as they acquire more sophisticated vocabulary. The cultural focus is Latin America and Spain. This course is conducted in Spanish.

## Spanish V

Elective  
Grade(s)12  
A Level  
Prerequisite:  
C- in Spanish IV and teacher recommendation

Full Year

This course is a continuation of Spanish IV. Oral presentations, skits, dialogues, 'tertulias', etc. are required as they parallel the curriculum. Readings include short stories, newspaper articles, and magazines. Weekly journals and essays are included to improve grammar skills. The cultural focus is Spain, beginning at the Inquisition and continuing to Francisco Franco. This class is conducted in Spanish.

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### Department: Health and Physical Education

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## Arcadia Action

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Semester

The students will watch the weekly episode of JOAN OF ARCADIA during the first class and discuss the episode during the second class. The discussion will focus on a variety of questions including theme(s) of the episode, common moral dilemmas of the show, and how they can personally relate to and learn from the episode. At the end of each discussion students are required to write journal reflections. The grade is based on participation and a completed journal. The class is pass/fail and the grade is based on participation and a completed journal. This course meets two days per cycle.

## Health Education

Required  
Grade(s)11  
A Level  
Prerequisite:  
None

Health Education is a mandatory course that must be passed for graduation. Emphasis is placed on information building, and decision making skills through the use of class discussions, audiovisual presentations, lectures, role play, and guest speakers. Areas of concentration include disease prevention, first aid and CPR, tobacco, and consumer health. This is a course designed for older students preparing to enter the next stage in their life, beyond high school. The instruction in this course completes the secondary requirements contained in the Health Education Frameworks.

## Honors Leadership

Elective  
Grade(s)11-12  
Honors  
Prerequisite:  
Successful completion of the Physical Education Leadership course and approval of director

This elective course may be taken during a student's senior year and is an elective course. Students will serve as teacher aides in physical education at the elementary, middle or high school levels. Enrollment in this program is limited. Students are required to keep a journal of their daily activities and write a term paper on their experiences each semester. Also, with the aide of their master teacher, students write lesson plans and unit plans for classes that they teach. It is required that students have taken PE Leadership prior to this course. Any student with a genuine interest in teaching as a career will benefit from this course. This course meets two days per cycle.

## Physical Education 11-12

Required  
Grade(s) 11 - 12  
A Level  
Prerequisite:  
None

The course emphasis is on allowing students to use previously acquired skills in a wide range of elective activities. Priority is placed on self-motivated physical activities that students can be involved with in later life. Enrichment activities include indoor rock climbing, social dance, fencing and self-defense. Skill competencies, written assignments and class evaluations are incorporated into some of the units. Each grade level is expected to show proficiency in the activities that are important for their personal development at the appropriate age. The physical fitness level of students is assessed and recorded. This course meets two days per cycle.

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## Physical Education 9-10

Required  
Grade(s) 9 - 10  
Prerequisite:  
None

Semester

Students rotate through a wide variety of activities which include many of the following: aerobics, step aerobics, weight training, basketball, field hockey, flag football, lacrosse, soccer, softball, volleyball, archery, badminton, bowling, golf, table tennis, tennis, track and field, cross country skiing, New Games, Project Adventure and dance. Personal fitness seminars disseminating information on fitness and nutrition are presented to all students. The physical fitness level of students is assessed and recorded. Skill competencies, written assignments and class evaluations are incorporated into some of the units. Each grade level is expected to show proficiency in the activities that are important for their personal development at the appropriate stage. This course meets two days per cycle.

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## Physical Education Leadership

Elective  
Grade(s) 11-12  
A Level  
Prerequisite:  
Approval of the director

This class may be taken during a student's junior or senior year. It is an elective course that may be taken to meet a student's normal physical education requirement or as an additional elective course. Students, under the direction of the physical education teaching staff, serve as assistant teachers, and will work with Freshmen and Sophomore classes or Adaptive PE classes. Students are required to keep a journal of their daily activities, write lesson plans for classes in which they assist, and write a term paper on their experience during the semester. A genuine interest in teaching is a necessity. This course meets two days per cycle.

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## Wellness Education

Required  
Grade(s) 9  
A Level  
Prerequisite:  
None

Semester

The Wellness course is required for all freshmen. This curriculum begins with an orientation to the high school. Instructional emphasis will not only provide information but will facilitate decision making capabilities around the many life long choices made as adolescents, in areas ranging from physical, mental to social issues. The content presented to students incorporates the following: emotional health, sexuality education, conflict resolution and substance abuse prevention.

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## Department: Instructional Technologies

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### Advanced Computer Science

Elective                      Full Year  
Grade(s)10-12  
Honors or A Level  
Prerequisite:  
Introduction to Computer Science,  
Algebra II and permission of staff.

Java is the language of the Internet. Developed by Sun Microsystems, the Java language is object-oriented and allows developers to write programs (applications) that will run on any computer or write a program that can run on a Web page (applet).

This course is an introduction to the Java programming language. It introduces students to object-oriented programming concepts and the Java syntax necessary to implement them. Students will be able to write Java applications that use GUI components as well as Java applets for use on the Internet.

While Java will be used in this course, students will develop an understanding for programming in general and the knowledge of the fundamental concepts that are crucial to learning and using any programming language. This course can be taken for Honors credit with agreement of the instructor.

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### Advanced Multi-Media Design

Elective                      Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
Multi-Media Applications

Computers have become a critically important tool of design professionals as an aid in the communication of ideas. In this course, students will learn to use a variety of graphic visualization tools including: 3D Studio Max, VectorWorks, Flash and Final Cut.

The course will provide students with a comprehensive introduction to the multimedia concepts required to transform their ideas into models and animations. Students will come to understand the full potential that these tools offer them to facilitate communication of complex ideas. Other advanced multimedia tools will also be explored. Special emphasis will be given to the development of project planning and workgroup skills.

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### Advanced TV Production

Elective                      Full Year  
Grade(s)11-12  
Honors or A Level  
Prerequisite:  
Permission of Director of ETS and TV  
Production I and II

This class is offered as an independent study to those students who have demonstrated an ability to work independently in the past in Television Production I and II courses and who would like to continue their interest in studio productions and operations. These students have exhibited advanced knowledge of the television studio and its operations. They may also have an interest in furthering their education in the field of communications. The students who elect to take this course will be responsible for the following: sophisticated video productions, integration of advanced computer graphics, producing regular programming for curriculum and educational purposes, producing and directing special productions and sporting events, participating in channel programming and assisting students in Television Production I and II. Students will be introduced to Final Cut pro, one of the premier nonlinear editing software used in production today. Technology integration continue to an integral part of this class and it is expected that students will participate in assisting others to achieve this goal. Honors credit requires a contract with the instructor for additional independent work. Enrollment is limited and this course will not appear on the course of studies selection sheet. Interested student must speak to the director as soon as possible.

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## **Integrated Keyboarding**

Elective                      Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

This course introduces the students to the computer as a tool and empowers them with a set of school- and work-based competencies necessary to be functional and productive citizens in an ever-increasing technological society. Approximately 50% of the time will be dedicated to the touch method of keyboarding. Students will then focus on using Microsoft Word and Excel. Personal and business correspondence, resume writing, basic desktop publishing, presentation and spreadsheet design and use will be covered. This is an extremely valuable course for personal use and/or college preparation. This course meets four days per cycle.

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## **Introduction to Computer Science**

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
Multi-Media Applications and  
permission of staff

Computer programming is an essential skill for almost every high-technology career field today. Computer programming also helps the development of logical, analytical, and structured thought processes, which are useful in every field.

This course is an introduction to programming in a high-level language (Visual Basic). The content will include the following:

- Design of algorithms
- Writing of computer programs in the Visual Basic

This introduction to Visual Basic focuses on important concepts such as event-driven programming and working with objects. Beginning with an introduction to Visual Basic, objects, properties, and code, the text progresses through step-by-step, hands-on exercises, and reinforcement projects. This course can be taken for Honors credit with agreement of the instructor.

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## **Introduction to Television Production**

Elective                      Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

This course is a semester course for those students who have an interest in the field of television production and media integration. Students will learn the basics of video production: camcorder and studio camera use, interview techniques, story boarding, analog and digital editing using iMovie software, audio, video mixing, and post production. In addition, students will learn the importance of media literacy. This knowledge will enable the students to support classroom teachers in various projects and assist in elementary and middle school programming as well as produce their own segments for over-air broadcasts. This class requires after school and evening participation.

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## **Multi-Media Applications**

Elective                      Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Students will use many of the iLife software applications such as iPhoto, iTunes and iMovie to create and publish exciting multimedia projects. Students will learn about effective communication techniques as they work collaboratively to develop skills using: computers, camcorders, digital imaging tools, desktop publishing software, and hypermedia. All students will apply these new technology skills to the acquisition and analysis of information as they create their own multimedia production for this class as well as others.

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## Television Production I

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Full Year

The students in this course will experience first hand the ever-changing technology in the field of television production and media integration. This class is an extension of Introduction to Television Production. The students will learn the basics of television production: camcorder and studio camera use, interview techniques, story boarding, analog and digital editing using iMovie software, audio, video mixing, and post production. During the spring semester, students will learn basic graphic design, directing, technical directing, lighting, floor managing, and video playback. Knowledge of these elements will enable the students to support classroom teachers in various projects and assist in elementary and middle school programming. This class requires after school and evening participation. On a rotating basis, students will participate in field production crews covering special events live and/or taped for later broadcasting. Some of the productions they will be responsible for are Colonial Magazine, ETS News 34, and School Committee meetings.

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## Television Production II

Elective  
Grade(s)10-12  
Honors or A Level  
Prerequisite:  
Television Production I and  
permission of ETS director

Full Year

The purpose of this course is to further develop the skills acquired in previous classes with more emphasis placed on the quality of the segments produced. Students are expected to accept a more responsible role during productions for over air broadcasts including directing, technical directing, and graphic design. Students may also be responsible for the design of graphics for over air public announcements. Students will be introduced to Final Cut pro, one of the premier nonlinear editing software used in production today. Audio/video technology integration is an integral part of this program and it is expected that students will be involved in assisting teachers, students, and others to achieve this goal. Cooperative teamwork and strong organizational skills are essential. After-school and evening productions continue to be an integral part of the program. Honors credit requires a contract with the instructor for additional independent work.

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## Web Design

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Semester

This class will focus on web page content, planning, design, setup and maintenance of a web site. Throughout the course students will work with partners to create a web site with multiple pages and functions. Students will become familiar with terms and components of the Internet, and develop an awareness of design considerations that affect web page construction. Students will learn to use many technology tools as they create their sites including scanners, digital cameras, and software. This is not a programming course, and although HTML will be discussed, powerful visual editors such as Macromedia and Dreamweaver will be used for page construction. With the widespread use of the Internet, web page design will provide students with technology skills and knowledge to become effective communicators in this exciting new medium.

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## Department: Math

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### Accounting

Elective                      Full Year  
Grade(s) 11-12  
Honors or A Level  
Prerequisite:  
None

This course stresses the basic principles necessary for an intelligent understanding of the books and records used in business: debits and credits; opening and closing books; classification and analysis of accounts; controlling accounts; trial balance; working papers, and the preparation of financial statements. As concepts are learned, students will use a computer application that provides the opportunity to use automated accounting software to record their work.

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### Advanced Math I

Elective                      Full Year  
Grade(s) 10-12  
A Level  
Prerequisite:  
C+ in Integrated Algebra/Geometry I and II

This course in higher level mathematics will begin to explore multi-variable models, formalization of the concept of functions, function notation, domain and range. Students will use polynomial, exponential, and rational expressions to model relations among variables. Methods for solving equations and inequalities be studied including factoring, the quadratic formula, and algebraic proof. Geometric reasoning, patterns in variation, and families of functions will also be studied. The TI83 graphing calculator is highly recommended because it is used extensively.

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### Advanced Math II

Elective                      Full Year  
Grade(s) 11-12  
A Level  
Prerequisite:  
C+ in Algebra II or Advanced Math I or C in College Review II and teacher recommendation

This course formalizes and extends important mathematical ideas drawn from the four strands of Algebra and Functions, Geometry and Trigonometry, Statistics and Probability and Discrete Mathematics. The focus will be on the Mathematics needed to be successful in college mathematics, Statistics, or Calculus courses. Topics studied will include the fundamental concepts underlying calculus and their applications including: rate of change, modeling motion, logarithmic, polynomial, and rational functions, conic sections. Emphasis will also be placed on manipulating symbolic representations of polynomial, rational, exponential, logarithmic, and trigonometric functions. Other topics will support further study in Probability and Statistics, including counting models, mathematical induction, binomial distributions, and statistical inference.

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### Advanced Placement Calculus

Elective                      Full Year  
Grade(s) 12  
Advanced Placement  
Prerequisite:  
B in Honors Geometry; B in Honors Algebra II; B in Honors Advanced Math and teacher recommendation

This course consists of a full academic year of work in calculus and related topics comparable to courses in colleges and universities. The year will be devoted to topics in integral and differential calculus to prepare the student for the CEEB Advanced Placement Exam. A TI83 graphing calculator is required. Summer reading and/or a special project may be required. Students must take the AP exam in the spring.



## **Advanced Placement Statistics**

Elective                      Full Year  
Grade(s)12  
Advanced Placement  
Prerequisite:  
B in Honors Geometry; B in Honors Algebra II; B in Honors Advanced Math and teacher recommendation

This course will investigate the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The four major conceptual themes are: 1) Exploring data by observing patterns and departures from patterns 2) Planning a study by deciding what and how to measure 3) Anticipating patterns by producing models using probability and simulation 4) Making statistical inference by confirming models. Summer reading and/or a special project may be required. Students must take the AP exam in the spring. The TI83 graphing calculator is highly recommended because it is used extensively.

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## **College Review Mathematics I**

Elective                      Full Year  
Grade(s)10-12  
A Level  
Prerequisite:  
Integrated Algebra/Geometry I and II and teacher Recommendation

This course will reinforce and expand upon concepts presented in Integrated Algebra/Geometry I & II. Topics will include statistical analysis of data and how to represent real world situations with graphs and algebraic models. The course will also include a study of probability, functions, geometric transformations, three-dimensional geometry, and trigonometry. Students will build a foundation for success in Advanced Math I. Graphing calculators and programs such as Sketchpad will be used throughout the course as a tool for problem solving and to develop students' understanding. The TI83 graphing calculator is highly recommended because it is used extensively.

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## **College Review Mathematics II**

Elective                      Full Year  
Grade(s)11-12  
A Level  
Prerequisite:  
Geometry and Algebra II or Advanced Math I teacher recommendation

This course will reinforce and expand upon concepts presented in Integrated Algebra/Geometry II and Advanced Math 1. The emphasis will be on collecting and analyzing data, and solving problems and using mathematics to model real world situations. This course will prepare the college bound non-math major students for the required math courses he/she will encounter in his/her college career. Graphing calculators and programs such as Sketchpad will be used throughout the course as a tool for problem solving and to develop students' understanding. Students who have completed Advanced Math II are not eligible for this course.

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## **Honors Advanced Math**

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
B- in Honors Algebra II or A- in Algebra II and B- in Honors Geometry or A- in Geometry and teacher recommendation

This pre-calculus course prepares students for college mathematics and science courses. It includes functions and relations, circular functions and trigonometry, analytic geometry, polynomials of higher degree, exponential and logarithmic functions, and limits. Students excelling in this rigorous course are ready for Advanced Placement Calculus or Advanced Placement Statistics. The TI83 graphing calculator is highly recommended because it is used extensively.

## Honors Algebra II

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
B- in Honors Algebra and Honors  
Geometry or A- in Integrated  
Algebra/Geometry II and B- in  
Honors Geometry and teacher  
recommendation

This course is an accelerated Algebra II. The topics covered are equations (linear, quadratic, systems), inequalities (systems, graphing), exponents, radicals, imaginary numbers (complex numbers), exponential and logarithmic functions, and trigonometric relations. Advanced problem solving techniques and applications using the above topics will be covered. Graphing calculators are used for investigative study. The TI83 graphing calculator is highly recommended because it is used extensively.

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## Honors Calculus

Elective                      Full Year  
Grade(s)12  
Honors  
Prerequisite:  
B- in Honors Advanced  
Mathematics or A- in Advanced  
Math II and teacher  
recommendation

This advanced math course is for students who have successfully completed four years of previous honors math classes - Algebra I, Algebra II, Geometry, and Advanced Math. The intent of the course is to teach the subject matter with a level of rigor suitable for the mainstream calculus student. This course is not designed for those wishing to take CEEB Advanced Placement Test. The student must have a strong background in trigonometry, coordinates, graphs, lines, functions, and limits. Topics include: functions and limits, differentiation, applications of differentiation, integration, applications of the definite integral, logarithmic and exponential functions, inverse and hyperbolic functions, and techniques of integration. A TI83 graphing calculator is recommended because it is used extensively.

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## Honors Geometry

Elective                      Full Year  
Grade(s)9-12  
Honors  
Prerequisite:  
B- in Honors Algebra I or A- in  
Integrated Algebra II and teacher  
recommendation

This course includes the applications of geometric principals related to the physical world. These principles include definitions of basic geometric terms and figures, reasoning, congruence, theorems and proofs, similarity, perimeter, area, volume, properties of polygons and circles, constructions and transformations of shapes and applications of right triangle trigonometry. Writing mathematical proofs is an integral part of this course. The Sketchpad is used to do explorations and derive mathematical concepts. The TI83 graphing calculator is highly recommended because it is used extensively.

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## Honors Statistics

Elective                      Full Year  
Grade(s)12  
Honors  
Prerequisite:  
B in Honors Geometry; B in honors  
AlgebraII, B in Honors Advanced  
Math or A- in Geometry, A- in  
Algebra II, A- in Advanced Math II  
and teacher recommendation

This course will investigate the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The four major conceptual themes are: 1) Exploring data by observing patterns and departures from patterns, 2) Planning a study by deciding what and how to measure, 3) Anticipating patterns by producing models using probability and simulation, and 4) Making statistical inference by confirming models. Summer reading and/or a special project may be required. Students must take the AP exam in the spring. A TI-83 graphing calculator is required.

## **Integrated Algebra/Geometry I**

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
Teacher recommendation

This course will investigate and build upon the basic foundations of Algebra and Geometry in an approach that will enable students to make the connections necessary to apply their skills in a variety of application based problems. The units of study will include patterns in data, patterns of change, linear models, patterns in space and visualization, exponential models and simulation models. Important ideas are continually revisited for students to make connections and develop a lasting understanding of the mathematics they are studying. The course is aligned with the Massachusetts Frameworks and by the conclusion of year 2, students will have completed all of the requirements of Algebra I and Geometry. Graphing calculators and programs such as Sketchpad will be used throughout the course as a tool for problem solving and to develop students' understanding. The TI83 graphing calculator is highly recommended because it is used extensively.

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## **Integrated Algebra/Geometry II**

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
Integrated Algebra/Geometry Year I  
or B- in Algebra I

This course is a continuation of Integrated Algebra/Geometry Year 1 course. Students will continue their studies with number sense, statistical analysis of data and patterns, relations, and functions, with more emphasis on quadratic and power functions. Topics will include matrix models, coordinate geometry, direct and inverse variation, power models, analysis and modeling of two-dimensional shapes, trigonometric functions, and probability. Students who have completed Integrated Algebra/Geometry I or a full year Algebra I course must complete this course before moving on to Advanced Math I or College Review I. The TI83 graphing calculator is highly recommended because it is used extensively.

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## **Integrated Math and Science**

Elective                      Semester or Full Year  
Grade(s) 10-12  
A Level  
Prerequisite:  
Teacher Recommendation

This course integrates the study of science and related mathematical topics, ranging from algebra to geometry. This approach provides students with better insights into the relationship between science and mathematics and provides them the opportunity to see both as relevant and current. Concepts are developed in the laboratory, making regular class attendance vitally important. Good working habits and organizational skills will be stressed. This course is an interdisciplinary offering sponsored by the Math and Science Departments. This course may be taken for either one or two semesters.

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## **Statistics**

Elective                      Full Year  
Grade(s) Grade 12  
A Level  
Prerequisite:  
C- in Advanced Math II or B in  
College Review II and teacher  
recommendation

In this course students will develop an understanding of the vocabulary, symbols, concepts, and statistical procedures used in statistical studies. They will collect, organize, analyze, and summarize data, and make reliable predictions. The course will also include probability and probability distributions. Students will investigate real-life problems that require them to employ sampling techniques and see the relative applicability of statistics to solving problems. There will be an intense use of technology, particularly the TI83 graphing calculator.

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## Department: Music

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### Audio Production

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

Audio Production is a fine arts-science course that will familiarize students with the principles and practices used in recording and manipulating sound. The goal of this hands-on course is to provide students with the concepts and technology needed to effectively document audio events such as concerts and recitals with a high degree of quality. A variety of technology including laptop computers, analog and digital devices will be used to record, edit, and produce projects throughout the semester. Class projects will include the recording of rehearsals, recitals, and concerts toward the purpose of enhancing production skills and sharing the progress of performing groups with students, parents, and administrators. This course meets two days per cycle.

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### Concert Band

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
Experience with Middle School Bands or equivalent. Previous class or private instruction.

Concert Band is a performance course available for percussionists, brass, and woodwind players. This class explores concepts in musicianship, ear-training, theory, music literacy, musical terminology, and music history as well as teaching leadership qualities. Students in Concert Band will rehearse and perform quality wind band literature throughout the year. The opportunity to participate in Central District and All State music festivals is available. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation.

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### Concert Choir

Elective                      Full Year  
Grade(s) 10-12, 9 Boys  
A Level  
Prerequisite:  
None

The student need only show a desire to sing to become a member of the Concert Choir. Auditions are held for voice placement. All are accepted. Vocal techniques are developed, which include breath control, diction, posture, and intonation. Literature includes pop and show tunes, folk songs, spirituals, and classical selections. The organization performs for school and community events throughout the year, as well as presenting an annual spring musical theater production. The opportunity to participate in Central District and All-State Music Festivals is available. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation. This course may be taken for one semester with permission of the director.

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### Honors A Capella Choir

Elective                      Full Year  
Grade(s) 10-12  
Honors  
Prerequisite:  
Audition

Students are selected for participation by audition to insure a well-balanced ensemble. The music is of an advanced level allowing for solo work and unaccompanied singing. Students encounter music of many styles from early as well as modern composers. This group performs for numerous community events throughout the school year, in addition to scheduled concerts. Students are encouraged to participate in Central District and All-State music festivals. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation.

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## Honors Wind Ensemble

Elective Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
Selection by audition

Honors Wind Ensemble is designed to develop a student's highest musical potential through performing advanced quality literature in the wind band repertoire. Students are selected by audition for participation to insure a well-balanced ensemble. Auditions are held the previous spring. Advanced concepts in ear-training, theory, music literacy, musical terminology and music history will be explored. Students are encouraged to participate in Central District and All State music festivals. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation. This course meets four days per cycle.

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## Jazz Band

Elective Full Year  
Grade(s)9-12  
A Level  
Prerequisite:  
Permission of instructor

Students participating in Jazz Band will play the music of studio, dance, jazz and rock bands. Pop-ballads, Latin, jazz, and rock concert arrangements are rehearsed and performed. Activities include reading from sheet music, analyzing melodic lines, jazz rhythms and chord progressions, and improvisation. This is a course intended primarily for band members. Any interested guitar, bass and keyboard players must audition for the instructor prior to acceptance. All rhythm, (including percussion), are limited to two per instrument. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation. This course meets two days per cycle.

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## Movement for Theater

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Movement for Theater is a course designed to familiarize students with various theatrical dance styles. A history of Broadway theater movement will be studied and students will experience the execution and design of choreography. No prior experience is required. Skills will be taught from warm-ups to mini-combinations. Opportunities for studying guest artists will be presented, (live or video clip).

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## Movement for Theater

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Movement for Theater is a course designed to familiarize students with various theatrical dance styles. A history of Broadway theater movement will be studied and students will experience the execution and design of choreography. No prior experience is required. Skills will be taught from warm-ups to mini-combinations. Opportunities for studying guest artists will be presented, (live or video clip).

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## Orchestra

Elective Full Year  
Grade(s)9-12  
Honors or A Level  
Prerequisite:  
Experience with Middle School Orchestra or equivalent. Previous class or private instruction.

Orchestra is a performance based class for string players and a selected pianist. Students rehearse, study, and perform music for string ensemble and full orchestra. Music of each historical period is explored. Several performances are given throughout the year. Basic instruction for string playing techniques and styles is provided. Opportunity to participate in Central District and All State Music Festivals is encouraged as well as independent work in small ensembles. Students are also given the option to experience this course for honors credit through a written contract agreement with the instructor. Performances are an important component of this course and students are required to participate as part of their commitment to this group and part of their evaluation

## **Stagecraft**

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Semester

Stagecraft will explore the design process of theater for set, lights and costumes. Tool instruction and safety procedures will be covered as students learn how to design and construct set models. Students will also learn how to build and enhance basic platforms and theatrical flats as well as how to effectively paint a backdrop. Appropriate costume design and construction will be explored, as well as operation and plot design for the light board. Opportunities for backstage tour and discussion will be included.

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## **Techniques of Music Theory**

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
Permission of instructor

Full Year

Techniques of Music Theory is designed to develop and improve skills of rhythmic and melodic sight-reading, ear training, and solfege, (sight singing). Additionally, this course will introduce the tools and vocabulary necessary for composing and analyzing music, and students will be taught basic piano skills. This is a valuable course for any student who wishes to continue studying music after high school. Enhanced musical skills also contribute toward audition success. Much individual attention is given. Students should have an appropriate background in music for participation. This course meets four days per cycle.

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## **Theater Arts**

Elective  
Grade(s)10-12  
Honors or A Level  
Prerequisite:  
None

Semester

Theatre Arts is a one semester elective that is activity-based. Participants will learn basic performance skills incrementally, beginning with exercises in stage movement and improvisation. Although the exercise format continues through the semester, the focus shifts toward more formal acting skills. Character development and motivation are explored and all activities create the foundation upon which students draw to perform a memorized scene and monologue by the end of the semester. Honors requirements will be given in writing to the students at the beginning of the year.

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## **Department: Science Department**

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## **Action Biology**

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
Introductory Physics and teacher recommendation

Full Year

Action Biology is designed to give students a general introduction to ecology, chemistry of life, cell structure and function, genetics, evolution and biodiversity, as well as selected topics including plant, animal, and human physiology. Students are involved with numerous laboratory activities and discussions that provide an understanding of biology as it relates to our daily lives and our activities as citizens.

## **Advanced Placement Biology**

Elective                      Full Year  
Grade(s) 11-12  
Advanced Placement  
Prerequisite:  
B or better in both Honors Biology and Honors Chemistry, teacher recommendation and permission of instructor.

This course is designed to be the equivalent of a first year college biology course given to science majors. By achieving a certain proficiency on the Advanced Placement examination given in May, credit may be granted at a number of colleges. Using a college textbook, the course is an in-depth study of the fundamentals of biology and focuses on the requirements established by the College Board. Twelve predetermined laboratory projects will be completed during the year. Each lab involves considerable analysis of data. Frequent outside reading assignments will also be required. Summer reading and/or a special project are required. Students must take the AP exam in the spring. This course is an excellent preparation for the SAT II.

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## **Advanced Placement Chemistry**

Elective                      Full Year  
Grade(s) 11-12  
Advanced Placement  
Prerequisite:  
B or better in both Honors Chemistry and a honors math course, teacher recommendation and permission of instructor.

Advanced Placement Chemistry is designed to be the equivalent of a general chemistry course taken in college and focuses on the requirements established by the College Board. Emphasis will be on quantitative reasoning skills and development of models that summarize large amounts of data which explain chemical phenomena and enable predictions. AP Students will be expected to write explanations to non-quantitative questions and to conduct mathematical manipulations in preparation for the AP Chemistry exam given in May. Summer reading and/or a special project may be required. The course can be taken in either the junior or senior year. Students must take the AP exam in the spring. This course is an excellent preparation for the SAT II.

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## **Advanced Placement Physics**

Elective                      Full Year  
Grade(s) 11-12  
Advanced Placement  
Prerequisite:  
Honors Introductory Physics and B in Algebra II, Advanced Math I or Honors Algebra II and teacher recommendation

This course will cover the same topics as in Honors Physics but with greater rigor. Topics include: mechanics, electricity and magnetism, thermal physics, waves and optics, and atomic and nuclear physics. Students need to be familiar with algebra and trigonometry. Calculus, if used, will apply to some theoretical developments and will require only a basic understanding. The course is principally designed to develop students' ability to interpret and analyze physical information presented in verbal, mathematical and graphical form and hence is a problem solving course. The laboratory component will engage students in designing experiments, determining uncertainties in measurement, drawing inferences and communicating results. Students must take the B version AP exam in the spring.

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## **Basic Introductory Physics**

Elective                      Full Year  
Grade(s) 9-10  
A Level  
Prerequisite:  
Teacher recommendation

This course is a conceptual study of Basic Introductory Physics. Students will study the practical problems found in physics which include: scientific method, motion, force, energy, heat, light, and atomic structure. Since all concepts are developed through activities and laboratory work, class attendance is vitally important. Regular laboratory reports and homework will be collected. Teachers will emphasize the close association between science and technologies and integrate appropriate technology experiences.

## Bioethics

Elective  
Grade(s)12  
A Level  
Prerequisite:  
Honors Biology or Biology and  
teacher recommendation

Semester

Bioethics provides students with an opportunity to examine and discuss the social, ethical and legal dilemmas that arise from advances in medicine and biotechnology. Potential topics include organ donation and transplantation, abortion, assisted reproduction, euthanasia and assisted suicide, death and dying, environmental ethics, medical ethics, animal research and genetic technologies. Research-based projects or assignments are part of the curriculum. Students who want to take this course for honors credit must execute a written agreement with the teacher for additional work.

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## Biology

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
Introductory Physics and teacher  
recommendation

Full Year

Biology is designed to give students an introduction to ecology, chemistry of life, cell structure and function, genetics, evolution and biodiversity, as well as selected topics including plant, animal, and human physiology. Practical laboratory exercises following the scientific method will provide the student with experiences in biological problem solving. These exercises are designed to reinforce the material taught and discussed in class.

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## Chemistry

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
Teacher recommendation

Full Year

An understanding of basic chemical principles becomes increasingly important in our changing technological world. This course will fulfill college entrance requirements as well as provide a basis for further science courses. Chemistry is the science dealing with the structure and composition of substances and the mechanisms by which changes in composition occur. The relationships between matter and energy as well as the correlation of structure and properties is a major theme. Emphasis is placed on experimentation, use of scientific method, and problem solving in which math skills are applied. Daily assignments are given. Projects allow students to go beyond the scope of the textbook and to further explore current topics and issues in chemistry.

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## Earth Science

Elective  
Grade(s)9  
A Level  
Prerequisite:  
Teacher recommendation

Full Year

Earth science is an exciting and dynamic field and is designed to pilot an introductory course at the high school. As in Introductory Physics, skills in laboratory procedures, quantitative manipulations and graph interpretations are developed but are associated with Earth and Space Science. Course topics include: matter and energy in the Earth system, the Earth's sources of energy, Earth processes and cycles, and the origin and evolution of the universe. Some physics principles will also be introduced. This course builds on prior knowledge from the eighth grade curriculum but provides the depth of understanding associated with the state frameworks for grades 9 and 10. This course is an excellent preparation for future science courses.



## Honors Biology

Elective                      Full Year  
Grade(s)9-10  
Honors  
Prerequisite:  
B+ or better in Honors Algebra I or  
Honors Geometry, A in Algebra I,  
Integrated Algebra/Geometry II and  
B+ in previous year's science course  
and teacher recommendation

Honors Biology is a course designed for students who demonstrate high academic achievement and motivation in science and mathematics. Students will be expected to complete a significant amount of reading and writing assignments as well as quantitative and qualitative analysis of laboratory work. Topics emphasized include ecology, chemistry of life, cell structure and function, genetics, evolution and biodiversity, as well as selected topics including plant, animal, and human physiology.

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## Honors Chemistry

Elective                      Full Year  
Grade(s)10-12  
Honors  
Prerequisite:  
B in a honors math course or B+ in  
Integrated Algebra/Geometry II and  
teacher recommendation

The bases of this course are the fundamental principles of chemistry. Special emphasis is placed on the relationships between matter and energy as well as the correlation of structure and properties. Creative problem solving is encouraged as well as sound laboratory procedures, strengthening mathematical skills, and application of the scientific method. Emphasis is on topics of inorganic chemistry including qualitative and quantitative analysis, physical chemistry, solution chemistry, chemical kinetics, electro-chemistry, and nuclear chemistry. A high level of self-discipline is required for the completion of the assignments which can be weekly as well as daily. Projects are assigned to extend the curriculum beyond the textbook.

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## Honors Human Physiology

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
Honors Biology or Biology and  
Honors Chemistry or Chemistry and  
teacher recommendation

This is a course for the student interested in fields such as medicine, scientific research or biology/physical education. Lectures and laboratory experiences are designed to explore the anatomy (structure) and physiology(function) of the human body. In addition, students will compose technical papers, design and deliver self-selected oral presentations, and prepare technical and research projects.

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## Honors Introductory Physics

Elective                      Full Year  
Grade(s)9-10  
Honors  
Prerequisite:  
B+ in Honors Algebra I, Honors  
Geometry, A in Algebra I or  
Integrated Algebra/Geometry II, B+  
in current science course and teacher  
recommendation

This course is designed for the student who shows a high interest in science and may plan to major in science or engineering in college. A strong proficiency with mathematics is essential. Students explore our understanding of matter at the atomic level during part of the academic year. The rest of the course is devoted to the study of topics in introductory physics (electromagnetism, waves, forces, velocity, acceleration, vectors and heat). Honors Introductory Physics provides an excellent foundation for Advanced Placement Physics. Teachers will emphasize the close association between science and technologies and exemplify appropriate technology applications.

## Honors Physics

Elective                      Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
B in Algebra II, Advanced Math I, or  
Honors Algebra II and teacher  
recommendation

Highly-motivated students planning college majors in science, engineering or mathematics are urged to take this course. Areas covered include: graphical analysis of motion, kinematics, dynamics, vectors, conservation of momentum, conservation of energy, thermodynamics, light, optics, wave theory, sound, basic DC electricity, and magnetism. An inquiry approach is taken with the extensive lab work which is critical to the course. Labs will include traditional as well as computer-assisted data acquisition and analysis techniques. Students will not use this class as a prerequisite for Advanced Placement Physics.

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## Integrated Math and Science

Elective                      Semester or Full Year  
Grade(s)10-12  
A Level  
Prerequisite:  
Teacher Recommendation

This course integrates the study of science and related mathematical topics, ranging from algebra to geometry. This approach provides students with better insights into the relationship between science and mathematics and provides them the opportunity to see both as relevant and current. All concepts are developed in the laboratory, making regular class attendance vitally important. Good working habits and organizational skills will be stressed. Data will be looked at from a statistical viewpoint and graphed using technology. This course is an interdisciplinary offering sponsored by the Math and Science Departments. This course may be taken for either one or two semesters.

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## Introductory Physics

Elective                      Full Year  
Grade(s)9-10  
A Level  
Prerequisite:  
Teacher recommendation

Introductory Physics will introduce the student to fundamental physical laws that govern our universe. The approach encourages students to reason, predict, and draw conclusions based on experimental observations. Skills in laboratory procedures, quantitative manipulations, and graph interpretations are developed. Units covered include chemical behavior, forces and motion, heat, waves, light and electricity. Students are expected to keep all lab reports and discussions notes in an orderly notebook. Homework is given on a nightly basis, in order for the student to be prepared for the following day. Teachers will emphasize the close association between science and technologies and exemplify appropriate technology applications.

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## Lab Chemistry

Elective                      Full Year  
Grade(s)11-12  
A Level  
Prerequisite:  
Teacher recommendation

Students will be studying many of the practical problems associated with chemistry. All of the concepts are developed in the laboratory, making regular class attendance vitally important. Some of the topics studied will be: scientific method, chemical bonding, mixtures, solutions, nuclear chemistry, chemistry in the home and workplace, chemistry and pollution.

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## Physics

Elective                      Full Year  
Grade(s)11-12  
A Level  
Prerequisite:  
C in Algebra II or Advanced Math I  
and teacher recommendation

This course is recommended for students planning to attend college and needing a third year of a laboratory science. Additionally, students considering a career in any medical field should first study physics in high school before encountering physics in college. Topics include forces and motion, energy, heat, waves, light and sound, and electricity and magnetism. This course includes training in reasoning, as well as instruction in the methods and concepts of physics. There will be extensive laboratory work requiring both traditional methods and computer assisted data acquisition and analysis techniques.

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## Topics in Astronomy

Elective                      Semester  
Grade(s)10-12  
A Level  
Prerequisite:  
Teacher recommendation

This semester course is designed to familiarize students with the universe that surrounds them. The solar system, galaxies, constellations and other celestial objects are examined. The relation of outer space and the student is emphasized. Discussions using a planetarium and other optical instruments are part of the student activities. This course meets four days per cycle.

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### Department: Social Sciences

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## Advanced Placement Psychology

Elective                      Full Year  
Grade(s)11-12  
Advanced Placement  
Prerequisite:  
A in A level American Studies or B+ in Honors, or B in AP US History; Social Science teacher recommendation; successful entrance testing. In most cases, students who have taken Psychology are not eligible to take AP Psychology.

Advanced Placement Psychology is the equivalent of a college introductory psychology course. It explores human behavior and the mind. It addresses such questions as: "What makes us who we are? What are the biological bases of behavior? How do we learn? What are sensation and perception? What is adolescence? What is mental illness and how is it treated? What motivates people?" Classes include a combination of discussions, lectures, films and presentations. A variety of theories will be examined including Freud, Skinner, Piaget, and Kagan. Students should develop a better understanding of themselves and the forces acting upon them, as well as improve their critical thinking and writing skills. AP students should expect that the reading, writing, and discussions reflect demands appropriate to a college course. There will be research project. Students must take the AP exam in the spring.

## Advanced Placement United States History

Elective                      Full Year  
Grade(s)11 or 12  
Advanced Placement  
Prerequisite:  
A in the 2nd semester of the required Social Science course of the previous year, successful entrance testing and successful completion of summer work.

AP United States History is intended for students who are ready for the challenge of a college level course. A variety of approaches will be used in covering the American experience from the pre-Columbian through the post Vietnam era. Students making a commitment to Advanced Placement should expect the reading and writing demands appropriate to a college course. Successful completion of summer reading and assignments are mandatory for remaining in the course when classes begin in September. This course is open to juniors and seniors. Juniors accepted into this course will take either AP English (Language and Composition) or Grade 11 Honors English. These will replace the junior American Studies requirement. Students must take the AP exam in the spring and will participate in a modified performance assessment in June.

## **American History from 1763 to 1877**

Required  
Grade(s)10  
A Level  
Prerequisite:  
None

Full Year

This is the first year of a two-year course in American history. Following a chronological approach, the course begins with the colonial era and continues through Reconstruction. Students will study the causes and consequences of the American Revolution, as well as the development of the Constitution. Other topics of study include the early national period, the reform movements of the 1800s, Jacksonian democracy and westward expansion. The year will conclude with a study of the Civil War and Reconstruction.

Students will continue to develop their skills working with primary sources, research, discussion, reading and writing. Assessment strategies include written and oral reports, objective questions, open-response questions and document based questions

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## **American Studies**

Required  
Grade(s)11  
Honors or A Level  
Prerequisite:  
Teacher recommendation

Full Year

This is the second year of a two-year course in American history. Following a chronological approach, the course begins with a review of the Reconstruction era and continues to the present day. All of the traditional aspects of US History and English are part of this course. Students study these subjects with two teachers. Classes are scheduled during consecutive periods, providing flexibility in grouping students into different combinations. This course provides students with insight into the relationships among our literary, cultural, artistic, philosophical and scientific traditions that have created a diverse but common American heritage. Students will continue to develop their skills in working with primary sources, research, discussion, reading and writing. There are some common assignments and a variety of assessments are used including written, visual and oral reports, objective questions, open response questions and document-based questions. All students will participate in Performance Assessment at the end of the second semester.

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## **"By the People"**

Required  
Grade(s)12  
A Level  
Prerequisite:  
None

This course is designed to provide seniors with an understanding of their role in the local, state, national and global community. This course will also review the purpose, principles and practices of American government. Students will investigate their rights and responsibilities as American citizens and how to exercise these rights and responsibilities at the local, state, national and international levels. Current issues, class discussions, guest speakers, research and a service learning project provide students the opportunity to explore various aspects of their local and global community. Students continue to develop their skills as critical thinkers when analyzing evidence, issues and arguments. This course meets four days per cycle.

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## **Economics**

Elective  
Grade(s)11-12  
A Level  
Prerequisite:  
None

Semester

This course is designed to provide students with an introduction to economics. Following the guidelines of the Department of Education Frameworks, this course examines the allocation of scarce resources and the economic reasoning used by government agencies and by people as consumers, producers, savers, investors, workers and voters. Key elements include the study of scarcity, supply and demand, market structures, the role of government, national income determination, money and the role of financial institutions, economic stabilization and trade.

## Honors Topics: Asian and African History

Elective Full Year  
Grade(s) 11-12  
Honors  
Prerequisite:  
Teacher recommendation

This course is designed to enrich students' knowledge of Africa and Asia from ancient times to the present. Students will begin their study investigating early societies in Asia and Africa. Through the use of primary source documents, research, written, oral and visual reports, students study the evolution of society, religion, government, economics, philosophy and the arts in these regions. The course will conclude by examining the role the various regions of Asia and Africa play in the world today.

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## Honors Topics: Modern European History

Elective Full Year  
Grade(s) 11-12  
Honors  
Prerequisite:  
Teacher recommendation

This Modern European History course gives students an opportunity to acquire knowledge of European History from 1450 to the present. Through such study, students will develop the ability to weigh evidence and reach conclusions on the basis of facts. Students will learn how to extract information from primary documents and secondary sources; to use research techniques to make presentations, both written and oral; and to demonstrate analytical and interpretive skills of good scholarship. Students will present all research findings using both oral and written formats.

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## Psychology

Elective Semester  
Grade(s) 11-12  
Honors or A Level  
Prerequisite:  
None. In most cases, students who have taken Psychology are not eligible to take AP Psychology.

Psychology students will explore human behavior and the mind. Psychology provides an overview of many of the areas of psychology including social psychology, adolescence, methods of research, consciousness, learning, neuroscience, personality, and abnormal behavior and therapy. Classes will include a combination of discussions, lectures, films, and presentations. A variety of theories will be examined. Students should learn to think critically with psychology as they improve their critical thinking skills. Further, they should develop a better understanding of themselves and the forces acting upon them. Students seeking honors credit must execute a written agreement with the teacher for additional work.

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## Sociology

Elective Semester  
Grade(s) 11-12  
A Level  
Prerequisite:  
None

Students will explore human society in a variety of ways. This will involve the investigation of such social institutions as the family, politics, education, economics, and work. Sociological research will be used throughout the course to conduct surveys, interviews, and experiments on various topics. Additional topics of study will include social group dynamics and organization, as well as crime and sociology in law. Community service learning is incorporated in the course.

## World Civilizations

Required  
Grade(s)9  
A Level  
Prerequisite:  
None

The study of world history begins with the cultures of China, India, Japan and Africa. In the first semester, students will also investigate the foundations of medieval Europe and the development of the Islamic Empire. The second semester examines Europe from the Renaissance through World War II. Politics and diplomacy are studied as well as the social, economic, religious, scientific and technological factors that have shaped world history.

Students will develop skills in working with primary sources, research, discussion, reading and writing skills. Assessment strategies include written and oral reports, objective questions, open-response questions and document-based questions.

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### Department: Special Programs

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## Jobs for Bay State Graduates

Elective  
Grade(s)12  
Prerequisite:  
Permission of Instructor

Jobs for Bay State Graduates (JBSC), a unique program operating at Shrewsbury High School, provides guidance in job preparation and placement. The course is for seniors who are either college bound or planning to enter the world of work. The course offers two credits per semester students attend classes four times a cycle.

Curriculum includes resume writing, applications, cover letters, interviewing techniques, goal-setting and identification of occupational interests. Job shadowing and guest speakers also play a key role in career development. Jobs for Bay State Graduates will assist students in securing the jobs of their choice and will help prepare them for life after graduation. This course meets four days per cycle..

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## Senior Exhibition

Elective  
Grade(s)12  
Honors or A Level  
Prerequisite:  
Permission from coordinator

The intent of this program is to allow a selected number of graduating seniors the opportunity to demonstrate their skills as independent learners by becoming involved in an area of personal interest. The graduation exhibition will be evidence of a student's ability to problem solve, organize time and resources, communicate effectively and reflect on oneself as a learner. Students will be required to demonstrate competence through the creation of a portfolio, exhibition, and reflective essay. A faculty mentor will be assigned to each student. Students must apply in May of junior year to be considered for this program.

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## Service Learning

Elective  
Grade(s)9-12  
A Level  
Prerequisite:

As members of the service learning class, students will complete two individual service projects to gain a better understanding of service learning, and facilitate service learning throughout the district by means of faculty presentations, student recognition ceremonies, and involvement in the after-school advisory board. Students gain skills in leadership, organization, teamwork, event planning, meeting deadlines, professionalism, communication, and fulfilling responsibilities.

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## Virtual High School

Elective                      Full Year  
Grade(s) 11 or 12  
Honors  
Prerequisite:  
Permission of Site Coordinator

The Virtual High School is a national program for delivering high caliber (many courses are for honor credit), nontraditional curriculum over the Internet. At Shrewsbury High school, a predetermined number of students may choose exciting courses from a very diverse catalog, developed by specially trained teachers from across the nation. VHS participants should be students who are motivated to use cutting-edge information technology, can budget their time effectively, enjoy working independently, and have some pioneer spirit. This program can offer some flexibility to students who, due to scheduling conflicts, cannot take a course to receive credits required for graduation. For electives, students will find unique courses in the catalog, taught by teachers with special interests. Students will be scheduled for computer access time during the day for VHS course work or they may work at home. Check out Virtual High School by visiting the web site at: [www.govhs.org](http://www.govhs.org). Follow the academic link to the course catalog and a demo net course.

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### Department: Tech Ed

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#### Architecture and Graphic Design

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

The design process necessary for the planning and graphic presentation of an efficient home will be emphasized by learning about the relationship between various rooms and spaces. Acting as if they were architects working for a client, and using computer aided design equipment, students will draw floor plans, three dimensional models, furniture plans and elevations of a house in an American architectural style of their choice. Relationships between these types and Roman architecture will be explored. Models will be constructed. Computer graphic processes such as digital photography and desk top publishing will be used to promote the house design in a professional manner. An understanding of the elements and principles of design will become clear to students as they practice these techniques throughout the course. Students who wish to explore the fields of graphics, architecture, and /or interior design should enroll in this class. Honors credit can be arranged through a written agreement with the instructor for additional independent work. This course fulfills the semester arts graduation requirement.

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#### Automobile Systems

Elective                      Full Year  
Grade(s) 10-12  
A Level  
Prerequisite:  
None

Students will solve problems and gain a fundamental understanding of the automobile by working on the common major systems, engine, lubrication, cooling, fuel, emission, exhaust, transmission, suspension, brake, steering, heating & air conditioning, electrical, and body. Students will have the opportunity to explore the relationship between computers and the integrated electronic systems of automobiles. In the class, the student will become familiar with many of the different positions that are available in the field of automotive technology, and will learn to provide automotive services. The educational and training opportunities available to the students after high school will be stressed. Students who wish to explore the field of automotive tech should enroll in this class. Successful completion of this course with a grade of B or better will qualify the student for college credit at New England Institute of Technology.

## **Consumer Auto**

Elective                      Semester  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

This course is designed for the student who generally will not further his or her education in the auto industry, but who realizes the importance of auto knowledge. The student will be instructed in the everyday operation and maintenance of the car, and will learn what to look for when purchasing a vehicle. Excluding housing, the vast majority of people will spend more money on automobiles than anything else during their lifetime. It makes a great deal of sense to know as much as you can about them.

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## **Designing in the 21st Century with CAD**

Elective                      Full Year  
Grade(s) 9-12  
Honors or A Level  
Prerequisite:  
None

This course replaces the Computer Aided Drafting for Engineering by enhancing the drafting course with hands-on opportunities for students to build and construct from their designs. This course is a year-long implementation of the Museum of Science curriculum for Designing in the 21st Century and provides students with a comprehensive introduction to technology. Students will use the design process, including drafting, to design and build projects in the following units: design and manufacturing, thermal and fluid systems, electrical and communications, construction and integrated systems. Using Vector Works, in conjunction with a scanner, digital camera, laser printers and plotters, students will acquire a competent background in the drafting knowledge needed for college and technical programs. To obtain honors credit, the student must execute a written agreement with the instructor for additional work.

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## **Exploring Technology**

Elective                      Full Year  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

This is a full year course designed to offer the student an exploratory experience in general technology. Students rotate through twelve different modular workstations where they gain technological knowledge by performing hands-on activities in the fields of: construction, basic electricity, electronic communications, hydraulics, pneumatics, materials and processes, lasers, fiber optics, mechanisms, research and design, aerodynamics, and alternative energy. Students will also use the engineering design process to identify a design problem within constraints, evaluate ideas, build and test prototypes, and use CAD to draw plans with specifications.

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## **Internal Combustion Engine**

Elective                      Semester  
Grade(s) 9-12  
A Level  
Prerequisite:  
None

In this course, students will work with the two and four-cycle internal combustion engine in order to gain an understanding of fuel systems, carburetion, ignition systems, engine lubrication, engine cooling, measuring engine performance, tune-ups, cylinder reconditioning, piston rings, rods, bearings, valves, and pollution control.

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## Robotics/Electronics

Elective  
Grade(s) 9 - 12  
A Level  
Prerequisite:  
None

Robots are devices that have the intelligence to interpret information, make decisions, and then effect their environment. Students in this class will explore the exciting relationship between computers and machines by using the engineering design process to build and program robots. The fundamentals of electrical circuits will be an integral part of the course. In the tradition of the First Robotics Competition, students will also work in teams to engineer and construct radio controlled vehicles that will compete with each other on a playing field. No previous background is required.

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## School Projects

Elective  
Grade(s) 9-12  
A Level  
Prerequisite:  
Teacher recommendation

Join us for a variety of creative experiences which are directly related to our school. Use your creativity and talent to improve school facilities and environment by participating in the building of the countless projects for Shrewsbury High School and the town. These projects will vary. Examples of some of the work that the class has done are: the making of the Bergstrom Field sign; the construction of small buildings or room renovations; the construction of trophy cases for the Athletic Department; the making of starting blocks for the swim team; the building of the signs in front of the Town Hall. If you have an idea for a special school or town project, come and create it in this class or help with another idea.

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## Transportation and Power

Elective  
Grade(s) 11-12  
A Level  
Prerequisite:  
Auto Systems

In addition to working on the major automobile systems, students will be involved with activities that include the construction of : 1. various power and energy systems such as wind and solar, 2. various transportation systems such as electric and marine vehicles, 3. systems that deal with recycling and waste disposal. Students will have the opportunity to explore the relationship between computers and the integrated electronic systems of automobiles. In the class, the student will become familiar with many of the different positions that are available in the fields of automotive technology, transportation, and power and will learn to produce goods and provide services related to these fields. Students who wish to explore the field of automotive technology should enroll in this class. Successful completion of this course with a grade of B or better will qualify the student for college credit at New England Institute of Technology.

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## Department: Visual Arts

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### Advanced Placement Studio

Elective Full Year  
Grade(s)12  
Advanced Placement  
Prerequisite:  
Studio II and portfolio assessment  
department faculty and director.

Students **focus** on the concentration aspect of the AP Portfolio as well as fine tune their breath section. Students **must** be able to work at a demanding pace, to meet deadlines and to work outside of class. Students must be able to work independently. Individual style, originality and expertise in media use are stressed. Students are evaluated using the Boston Globe Scholastic Art and the Advanced Placement rubrics. They are required to submit the Portfolio in May. Students will also be able to complete the work needed for a college portfolio including slides. A fee for slides is assessed, Students will create a power point presentation and will display their work at the Arts Festival in May as part of their class assessment. Summer assignments may be required.

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### Art Foundations

Elective Full Year  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Students who have an interest in art and in a multiple year art experience are encouraged to take this course. Students are given a thorough experience in media and the creative process and are encouraged to think creatively and critically. The elements and principles of art are stressed and students are introduced to various artists and art movements. Some work is done outside the class setting.

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### Art Intro

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

This is the basic prerequisite course for all students. This satisfies the graduation requirement and allows students to take other art offerings. The elements and principles of art are featured. Students are introduced to different media and subject matter, are encouraged to think creatively and critically and are introduced to various artists and art movements.

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### Art Seminar

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Students will explore a variety of art movements including aesthetics. This seminar has a lecture, slide and discussion format which involves individual and group work. While there may be a project from time to time, this is not a product-based course as in studio offerings. This course meets two days per cycle.

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### Calligraphy: Italic

Elective Full Year  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Students will discover the art of “beautiful writing” through hands-on experiences learning the Italic style. In a series of guided activities students will learn the Italic alphabet and apply these skills to projects such as song lyrics, invitations, menus and the like. Practice is needed outside of class. This course meets four days per cycle.

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## Ceramics

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Semester

Students will use both hand built techniques and the potter's wheel. They will explore the use of glazes and firing of ceramic ware. Attention will focus on form and function. A materials fee may be assessed if students choose to do oversized or additional work beyond the class requirements. This course meets four days per cycle.

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## Creative Journaling: Art as a Process

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Not available for students in AP or Honors Art Portfolio

Semester

Using sketchbooks and creative journaling, students will explore art as a process rather than a product. They will experiment with a wide variety of materials and concepts through short two and four day assignments. They will reflect on topics related to their identity and the world around them. The objective is for the student to see the world as an artist and to creatively problem solve. This course meets four days per cycle.

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## Digital Imaging

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Semester

Students will use the Photoshop software program as a creative tool for self-expression. They will use the computer scanner and digital camera as artist tools in a series of guided and open-ended exercises. The principles and elements of design will be introduced. This course meets four days per cycle.

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## Drawing

Elective  
Grade(s)9-12  
A Level  
Prerequisite:  
Art Intro or Art Foundations

Semester

Students will develop and strengthen their observational skills from Art Foundations or Art Intro. Drawing media such as charcoal, pencil, colored pencil, pastel, pen and ink, and conte crayon will be introduced. Compositions will focus on observation of the figure, still life as well as portraiture, landscape and the use of perspective.

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## Graphic Design

Elective  
Grade(s)10-12  
A Level  
Prerequisite:  
None

Semester

This course will use PhotoShop, PageMaker and Freehand software programs. It is designed for students who have an art background /ability and want to use the computer as a different art media. The principles of design, rhythm, movement, balance, emphasis, variety and unity will be stressed. Students will create projects such as identity logos, magazine covers, brochures, business cards, and stationary using photographic images and the computer.

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## Introduction to Photography

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
None

Using black and white film, students will create a body of work that represents their basic knowledge of the manual camera use and darkroom techniques. They will take, develop and print their own pictures demonstrating an understanding of composition, values and tones. Students are encouraged to use their SRL manual camera and all students will provide their own film and developing paper. This course meets two days per cycle.

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## Painting

Elective Semester  
Grade(s)9-12  
A Level  
Prerequisite:  
Art Intro or Art Foundations

Students will take their drawing skills and apply them to a variety of painting media and subjects. Watercolor, acrylic, tempera, and mixed media will be explored. Artists and art movements will be referenced; as will be the use of color, color harmonies, value and spatial composition, Students will be encouraged to develop a personal style.

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## Studio I

Elective Full Year  
Grade(s)10-12  
Prerequisite:  
Art Foundations **or** Art Intro with  
Drawing, Painting or Three  
Dimensional Design

Students will begin to create works for a portfolio and should have a strong interest in art. They will explore self-expression and various media in depth in a series of guided and open-ended assignments. Artists and art movements will be explored. Some out of class work is needed.

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## Studio II:Honors Portfolio

Elective Full Year  
Grade(s)11-12  
Honors  
Prerequisite:  
Studio I and portfolio assessment  
department faculty and director.

Students will continue to create a portfolio that will meet college entrance requirements in a more individual series of guided and open-ended assignments. Individual style, originality and expertise in media use are stressed. Students are evaluated using the Boston Globe Scholastic Art and the Advanced Placement rubrics. Students interested in Advanced Placement will develop works for the AP breadth requirement. Outside work is needed in order to be successful. Summer assignments may be required.

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## Studio III: Honors Portfolio

Elective Full Year  
Grade(s)12  
Honors  
Prerequisite:  
Studio II and portfolio assessment  
department faculty and director.

Students **must** be able to work independently in a series of assignments that are tailored to their interests and strengths. Individual style, originality and expertise in media use are stressed. Students are evaluated using the Boston Globe Scholastic Art and the Advanced Placement rubrics. Students will be able to complete the requirements for a college portfolio including slides. A fee for slides is assessed. Outside work is required in order to be successful. Students will create a power point presentation and will display their work at the Arts Festival in May as part of their class assessment. Summer assignments may be required.

## Three Dimensional Design I

Elective                      Semester  
Grade(s) 9-12  
A Level  
Prerequisite:  
Art Intro or Art Foundations

Students will explore the various aspects of sculpture using additive, subtractive, construction and relief techniques. Materials used may include: wire, clay, wood, plaster, paper mache, cardboard and found objects. Assignments will cover the elements and principles of art as they relate to sculpture.

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## Three Dimensional Design II

Elective                      Semester  
Grade(s) 10-12  
A Level  
Prerequisite:  
Three Dimensional Design I

Students will review the techniques and materials from Three Dimensional Art I in a series of guided assignments and then make a personal selection for open-ended work in conference with the instructor. Students **must** be able to work independently. A materials fee may be assessed for the final piece depending upon media used.